

FARMSTEADS AND LAND TYPES IN
EMMET COUNTY, MICHIGAN

FRED W. FOSTER

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INTRODUCTION

A METHOD of land classification in which the unit of inventory is the land type has been proposed and applied in the field.¹ The basic land types for Emmet County were established by J. O. Veatch after reconnaissance in the early summer of 1937. By the close of the field season the northern two thirds of the county had been mapped.² The work was completed during the summers of 1938 and 1939. With aerial photographs it was possible to revise and refine the land types outlined in the first summer. New ones were added, and some were dropped to achieve the same degree of detail.

If the land types as established are valid entities, there should be some relationship between the physical conditions they represent and the cultural patterns that develop as they are used by man. Such connections will be best expressed in terms of productivity. A complex of conditions in addition to the productivity of his land influences the ultimate success or failure of any farmer. These include ambition, alertness, available markets, and the cost of transportation. In a small area where the same general advantages and disadvantages prevail marked variations in the character of farms and farmsteads from place to place will, however, reflect the quality of the land. On the basis of this idea correlations have been made between the land types and the farms and farmsteads in Emmet County.

DESCRIPTION OF THE LAND TYPES (SEE FIG. 1)

As Emmet County is approached from the north the land rises in a series of terraces retreating from the shore of Lake Michigan. These terraces are level or slightly inclined and are marked by

¹ Veatch, J. O., "The Idea of the Natural Land Type," *Proceedings of the Soil Science Society of America*, 2: 499-503. 1937.

² Stirling, M. C., "Land Types in Emmet County, Michigan," *Pap. Mich. Acad. Sci., Arts, and Letters*, 24 (1938), Part III: 55-59. 1939.

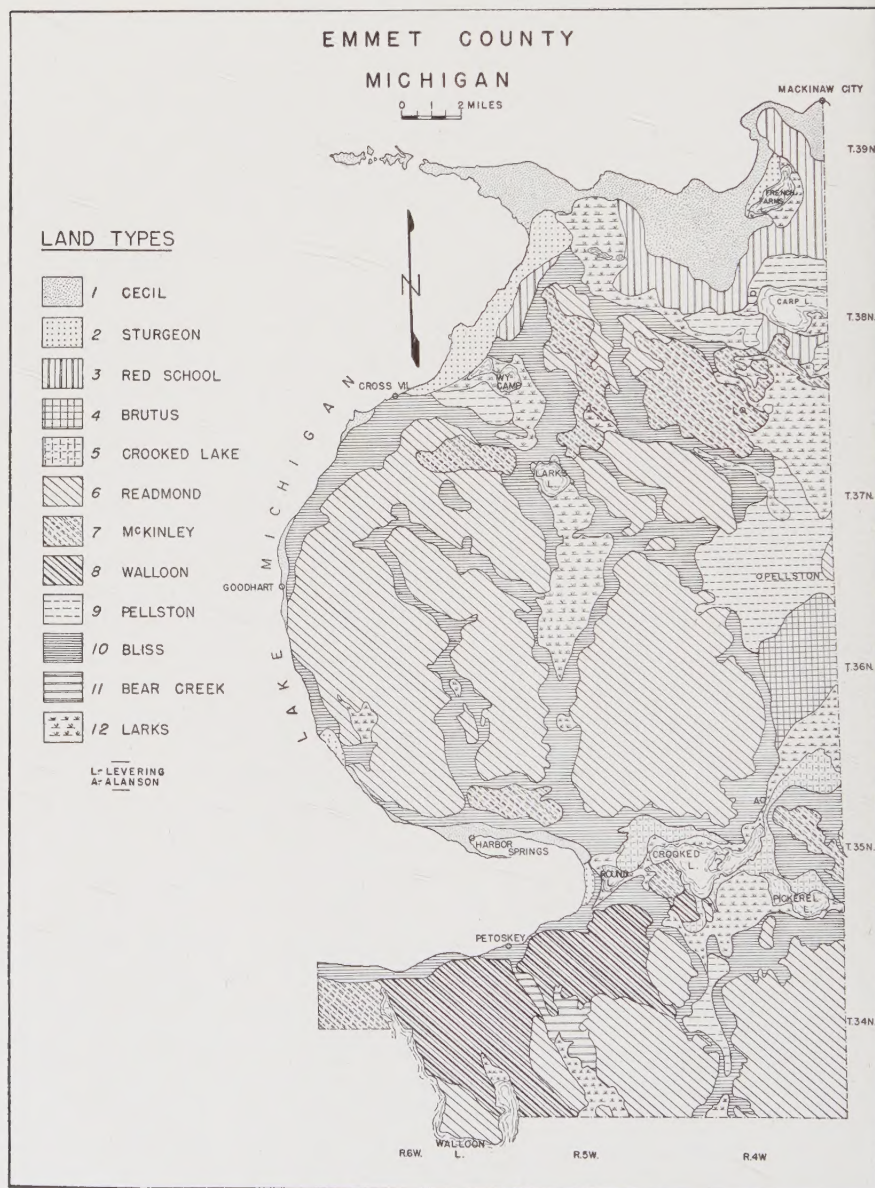


FIG. 1

relict shorelines along the lakeward margins. The nature of the drainage is dependent upon the position of the terrace and the character of the soil material. South of the benches a morainic mass stands high above a surrounding lowland area of diverse composition. The lowland is particularly evident along the east side of the county and is terraced after the manner of the benches in the north. The morainic material is shaped into drumlin-like ridges or deposited as sandy plateaus that are cut by numerous dry valleys. The plateau surface and its margins exhibit occasional kamic deposits. A number of broad flat-floored valleys transect the moraines. Their location is such that they separate the upland into a series of poorly defined ranges with a north-south trend. In the southern part of the county the eastern lowland swings to meet Little Traverse Bay. South of the depression thus formed the elevated area continues — the drumlins in the west and the sandy moraines in the east. On the varied surface described, with its complex associations of soil, slope, vegetation, and drainage, the land types are developed.

OUTLINE OF THE LAND TYPES

1. *Land Types with Small Local Relief and Slow or Poor Drainage*

CECIL

Vegetation

Major — Cedar, balsam fir, white spruce, aspen, white pine, Norway pine, red maple, alder, willow

Minor — Ash, elm, white birch, tamarack, hemlock, marsh grasses, sedges; leatherleaf bogs

Surface: Successive beach ridges with occasional flat areas

Soil³

Major — Alpena loam and cobbly loam, Eastport sand

Minor — Newton sand, Rifle peat, Greenwood peat, Wallace sand, Saugatuck sand and Granby sand

Drainage: Poor in swales and flats; small sluggish streams

RED SCHOOL

Vegetation: Cedar, white spruce, balsam fir, aspen, elm, ash, red maple, yellow birch, basswood, tamarack

Surface: Gently sloping toward the lake; broken by old sandy beach ridges

Soil

Major — Ogemaw sandy loam, Munuscong sandy loam

Minor — Saugatuck sand, Newton sand and Rubicon sand

Drainage: Slow; water has a tendency to stand on surface

³ For a description and discussion of the soils mentioned see Foster, Z. C., Shearin, A. E., Millar, C. E., Veatch, J. O., Donahue, R. L., *Soil Survey of Cheboygan County, Michigan*. United States Department of Agriculture, Series 1934, No. 15:1-47. 1939.

CROOKED LAKE

Vegetation: Cedar, white spruce, tamarack, elm, ash, red maple, aspen

Surface: Level; gently sloping

Soil

Major — Bergland clay loam or loam

Minor — Newton sand, Granby sand, or Rifle peat

Drainage: Slow on surface; ground water table high

BEAR CREEK

Vegetation: Aspen, with some conifer and red maple

Surface: Level to gently sloping, with occasional sandy ridges

Soil

Major — Antrim sandy loam

Minor — Kalkaska sandy loam, Newton sand and Saugatuck sand

Drainage: Slow to poor

BRUTUS

Vegetation

Major — Red maple, elm, aspen, ash

Minor — Cedar, spruce, balsam fir, hemlock

Surface: Level; gently rolling

Soil

Major — Selkirk silt loam, Brimley fine sandy loam

Minor — Ogemaw sandy loam, Saugatuck sand, Newton sand, Rubicon sand

Drainage: Slow to poor; seepage on some slopes

LARKS

Vegetation: Cedar, white spruce, balsam fir, ash, elm, red maple, alder, willow, aspen, tamarack, balm of Gilead, white and yellow birch

Surface: Flat

Soil

Major — Rifle peat, Newton sand, Saugatuck sand

Minor — Granby sand, Greenwood peat, Bergland clay loam

Drainage: Poor

2. Land Types with Small Relief and Rapid Drainage

BLISS

Vegetation

Major — Hard maple, beech, elm

Minor — Pin cherry, hemlock, aspen, basswood, yellow birch, white birch, white pine, Norway pine

Surface: Gently sloping, sometimes sharply broken at intervals, where terraces develop

Soil

Major — Kalkaska loamy sand or sandy loam

Minor — Rubicon sand, Wallace sand, Alpena cobbly loam

Drainage: Good; poor in spots

PELLSTON

Vegetation

Major — Aspen, pin cherry

Minor — Residual white or Norway pine and hard maple, bracken and grass

Surface: Practically level, occasionally broken by beach ridges

Soil

Major — Rubicon sand

Minor — Kalkaska loamy sand, Saugatuck sand, Wallace sand, Greenwood peat

Drainage: Good; poor in occasional small areas

3. *Land Types with Considerable Local Relief*

WALLOON

Vegetation

Major — Hard maple, beech, elm, basswood, yellow birch

Minor — Aspen, cherry, with cedar, balsam fir, red maple, ash, alder, and willow in depressions

Surface: Pronounced drumlin-like topography with a northwest-southeast trend, steep marginal slopes

Soil

Major — Onaway sandy loam

Minor — Onaway loam, Emmet sandy loam, Granby sand, Newton sand, Lupton muck, Rifle peat

Drainage: Poor in depressions

McKINLEY

Vegetation

Major — Hard maple, beech

Minor — Basswood, aspen, yellow birch, pin cherry, with cedar, balsam fir, elm, ash, red maple, alder, and willow in depressions

Surface: Plateau-like, or suggestive of drumlins

Soil

Major — Emmet sandy loam

Minor — Onaway sandy loam, Emmet loamy sand, Newton sand and Granby sand, Rifle peat

Drainage: Poor between many of the ridges

READMOND

Vegetation

Major — Hard maple, beech, elm

Minor — Aspen, hemlock, white pine

Surface: Dissected sandy moraine, steep marginal slopes, gentler interior slopes; surface often traversed by a maze of "fossil" valleys

Soil

Major — Emmet loamy sand

Minor — Emmet sandy loam, Onaway sandy loam, Kalkaska loamy sand

Drainage: Rapid; few streams; few if any swamp areas; some seepage on slopes

STURGEON

Vegetation

Major — Norway pine, white pine, jack pine, oak, aspen

Minor — Pin cherry, sugar plum, hard maple, white birch, grass, bracken, ground juniper; swales covered with sedges and marsh grasses

Surface: Dune topography with some fresh blow

Soil

Major — Wallace sand

Minor — Bridgman sand, Houghton muck

Drainage: Good; poor between dunes

FARMS AND THE LAND TYPE

Indians were the first agriculturalists in Emmet County. Their fields were small and widely separated; nevertheless, some corn was available for sale at the settlements along the Straits of Mackinac. The government surveyors' notes record the occasional Indian clearings on the lines of traverse. Unverified reports have mentioned Indian orchards. But despite encouragement by missionaries and the government, agriculture seems never to have supplied all the food needed. Hunting, fishing, and the gathering of wild plants supplemented the food supply. The area under cultivation was expanded as white settlers encroached upon the aboriginal domain, but the fields were never far from Lake Michigan. A good location was more important than soil fertility, and water travel was the chief means of communication. In consequence, the lake-border land types with good drainage were spotted with Indian clearings along the shoreward margins. These land types are the Bliss, Readmond, and Walloon.

It is sometimes assumed that lumbering preceded agriculture over most of the northern part of the Lower Peninsula of Michigan. In Emmet County lumbering and farming were contemporaneous. While the woodsmen cut over the Cecil, the Red School, the Sturgeon, and the Pellston land types, and parts of the Bliss, farm clearing was going ahead rapidly in other areas. The settler was not concerned with the potential value of the wood. Logs were used for cabins and barn timbers. The remaining trees were cut, hauled into piles, and burned.

From the very beginning the newcomers tilled the soil. Farm economy was based upon the production of potatoes and other root crops, grains, hay, and cattle. It is interesting to note that the early settlers predicted the decline of agriculture as the "rash" among them mortgaged their land and drove their oxen to Antrim County, where they traded them for horses.

These farmers labored under circumstances that were favorable to at least temporary success. The towns of Petoskey and Harbor Springs were growing rapidly; boats were continually docking along the shore, and the lumber industry was in full swing. Here was an adequate market for excess production. Then, too, with settlement came the resort industry and the railroad. One supplied a market

that would permit of some specialization, and the other an outlet for surplus produce — not ordinarily found in pioneer areas.

Much of the land gave every indication of being extremely fertile. The yields were large. Father Weikamp's mission farm, which was not considered of especially good soil, is supposed to have furnished as a twenty-year average the following per-acre harvest: wheat, 30 bushels; oats, 60 bushels; rye, 27 bushels; barley, 26 bushels; potatoes, 400 bushels; beets, 400 bushels; carrots, 400 bushels; turnips, 500 bushels; rutabagas, 500 bushels; timothy hay, $2\frac{1}{2}$ tons. The soils were rich in partly decayed organic matter, and certain amounts of accumulated soluble minerals were present. Surrounding woods held few pests, either plant or animal, to interfere with production. Prospects for agricultural development were regarded as being among the best in Michigan, and there can be no question but that farming had an auspicious start.

In the sixty-five years since the first agricultural settlement development has not progressed with the same speed or to the same degree on all the land types. Though the term "general farming" might be applied to all such activity within the county, the quality and the character of the agriculture vary from land type to land type.

Walloon agriculture. — Farming on the Walloon land type is the most successful in the county. The appearance of the farmsteads is generally prosperous. Fields, fences, yards, and orchards give an impression of being well cared for. Crops are vigorous, and the signs of a successful economy are seen everywhere.

A greater part of the surface has been cleared of vegetation. Trees grow in the steep-sided valleys that occasionally cut back into the hills and along the bottoms of the poorly drained depressions. Portions of the lowland areas have been cleared and are used for pasture. Fields are large, and the fence lines are straight. Farm economy is based upon the production of potatoes and animal products. Some acreage is devoted to alfalfa and other hay crops, as well as to corn and small grains, particularly oats and wheat. A fair percentage of the cropland is in pasture.

Despite the fact that farming here is general in character three types of specialization have developed — dairying, potato raising, and flower growing. Dairy farming, common over the land type, is most prevalent in the vicinity of Petoskey. These farms are among

the best in the county. Other farmers raise quantities of potatoes. The extreme specialization is indicated by emphasis on the production of certified seed. A few agriculturalists concentrate on flowers, bulbs, and seeds. The flowers are sold in the resort market and in Chicago. Seeds and bulbs are disposed of through the various seed firms.

McKinley agriculture. — Farming on the McKinley land type is similar to that on the Walloon. Less of the surface is cleared of its forest vegetation. Fields are smaller, and field lines are more irregular. Use of the lowlands for pasture obtains here also. There is relatively more potato raising but less dairying. Alfalfa is not so important as a hay crop, although a larger share of the area is given over to hay and pasture.

Readmond agriculture. — Agriculture on the Readmond is not particularly prosperous. There are a few areas where a greater concentration of the heavier soils is reflected in the quality of the farms, notably east and south of Goodhart and northwest of Harbor Springs. Here the agriculture is almost on a par with that of the McKinley. Otherwise the farms are definitely inferior in quality.

The farming is confined to plateau-like areas. Slopes give indications of having been used in the past, but they are mostly abandoned today. A great many of the fields are unfenced or surrounded with barbed wire. They vary in size and shape, and it is a common practice to crop only a part of each enclosed unit. As fields are given over to hay or pasture, the bottoms of the numerous valleys may continue in crop production. Parts of the farm area remain in second growth, with irregular borders marking the boundary between forest and clearing.

Land use shows little diversification. Corn is raised in small quantities. Potatoes seem to grow better than any other crop. Wheat, oats, and buckwheat are the chief small grains, but the per-acre output of none of these crops is great. Most of the farm area is given over to hay and pasture. Natural hay, sweet clover, and alfalfa are important in the order named. The pasture land is often permanent in the sense that it may not be cropped for several years. Cattle are a part of every farm system. Adjoining abandoned farms are occasionally used for hay or pasture. The humus content of the soil has been diminished through steady use. Rapid drainage lowers the quality of the food crops, stunts the hay, and diminishes the amount of pasturage.

Bliss agriculture. — Agriculture on the Bliss is favored by the level surface. Gravelly areas are apparently more fertile than those of a sandier texture, and the successful farms are generally on this phase of the Kalkaska soil type. With the exception of two areas farming is about on a par with that of the Readmond. Through the efforts of George Gibes, a Polish immigrant, a great many Poles settled on the Bliss land type in the vicinity of Larks Lake. Here the farms are distinguished by the neat appearance of the buildings, the diversity of the agriculture, and the ubiquitous geese. North of Harbor Springs the fortunate association of farm with city has aided the development of a successful economy. Dairies occur as the resort development and the demands of the village justify their existence. Near the town a number of people concentrate on the raising of fruits, vegetables, and flowers.

Throughout the rest of the land type agriculture is little advanced beyond that of the Readmond. Production of hay and pasture is the common use of the land. Corn and potatoes are apparently better crops here. Fields are more regular, but are no better fenced. One factor that gives this land type an advantage over the Readmond is its flatness of surface.

Brutus agriculture. — Most of the Brutus land type is occupied by a religious sect — the Mennonites. Under a system based on self-discipline an agricultural economy was developed that benefited all. A prosperous farm community resulted. Today the old manner of living is giving way before the automobile age and the principles of self-gain. Though the area is still successful the evidences of agricultural decay are everywhere apparent.

A heavy clay soil, the chief soil component of the land type, is difficult to plow. Great power is needed to turn the furrow to any depth. This feature and the resultant slow drainage make it poor land for corn, which has always been stunted, with small ears. Potatoes are a fair crop, but most of the cleared land is given over to grains and hay, particularly alfalfa. Fields are large, and little of the farm area is left in forest.

Pellston agriculture. — There are few farms on the Pellston land type. They appear to function below the level of subsistence. Stump pasture and natural hay predominate. The lack of fences and the neglected fields make it difficult to distinguish the used land from the unused. Browse lines in the small aspen groves em-

phasize the paucity of good grazing. Crops seldom seem worth harvesting.

Red School agriculture. — Large parts of the Red School land type are not used for agriculture. The area under cultivation appears, however, to be expanding. Here and there fields are being cleared of stumps. A stony surface and slow drainage contribute to the difficulties of farming. Though farmsteads are not prosperous-looking, continual improvement has been noted over a period of three years. The local markets at Mackinaw City and Mackinac Island may appreciably encourage the expansion of the farm area and the improvement of the farms.

Crooked Lake agriculture. — The Crooked Lake land type is handicapped by slow drainage. Land is cropped, but the farm homes are for the most part abandoned. Production is supplementary to that of the occupied farms on the neighboring land types. Hay is the chief crop, with a minor yield of small grains. Barns are large, and fences are uncommon. This land type is apparently unable to support a well-rounded farm economy, but it is unlikely that it will be abandoned so long as the contiguous areas are occupied.

Larks agriculture. — At various places within the Larks land type surface irregularities have resulted in exposures of mineral soil. These locations may be utilized for crops. There are seldom more than two or three farms in any one place. The cultivated areas are irregular and are devoted to general farming. Some farms leave one with the impression that the owners are not entirely dependent upon agriculture for their income.

Bear Creek agriculture. — Much of the cropland in the Bear Creek land type is held in farms located in large part outside the area. The farms wholly on this land type are small and ill fitted for agriculture. Hay and pasture constitute the chief use of the land. There is little indication that it will ever be more intensively used than it is today.

Sturgeon and Cecil agriculture. — The Sturgeon and the Cecil land types have practically no agricultural settlement. Apparently farming has never been attempted on the Sturgeon. On the Cecil it was maintained to supply lumber-camp horses with hay. It exists today on a subsistence or part-time basis.

Certain conditions have developed in the county that are both favorable and unfavorable to the success of agriculture. It is diffi-

cult to view each situation in terms of its direct relationship to a land type; nevertheless, correlations can be suggested.

Part-time farmers are found throughout the county. Many activities in addition to farming claim their attention from season to season. Exploitation of the second-growth forest is one source of outside income. The cement plant, the highway department, the seasonal demands of the resort areas are all sources of employment. Many people work in the factory cities of the southern part of the state during the winter months. It can be assumed that the amount of part-time farming decreases as the land type under consideration is more productive.

Many farms are developed with money obtained from other sources. Frequently the funds derived from the sale of the farm timber were used to build the house and barn and supply other improvements. Some farms are maintained as a hobby or a place of retiral should business fail or industrial production close down. The buildings and improvements on such farms often fail to reflect the agricultural productivity of the areas where they are located.

In the vicinity of Harbor Springs and Petoskey and, to a lesser extent, throughout the county, the resort trade has increased farm income. The purely seasonal character of this business makes it difficult, however, to adjust supply to demand. If sales throughout the year could be maintained near the summer level, farmers in the county would have few financial problems.

There has been some change in the method of farming during the last few years. Small grains are giving way to corn. At the same time the number of silos has increased. Dairying is becoming more important every year. In 1939 every farm in the county had, on an average, seven cows of milking age. A great deal of stress is laid on the growing of potatoes for certified seed. In 1939 approximately 3,400 acres were in potatoes.

FARMSTEADS AND LAND TYPES (SEE FIGS. 1-2)

It was felt that the number of occupied dwellings and the comparative quality of the farm buildings and farmyard units might indicate to some degree the success of agricultural enterprise in each of the land types. It is not enough to say how many operating farms occur per unit of land. Analysis must go further. Are the farmers barely able to supply the needs of home and family, or is

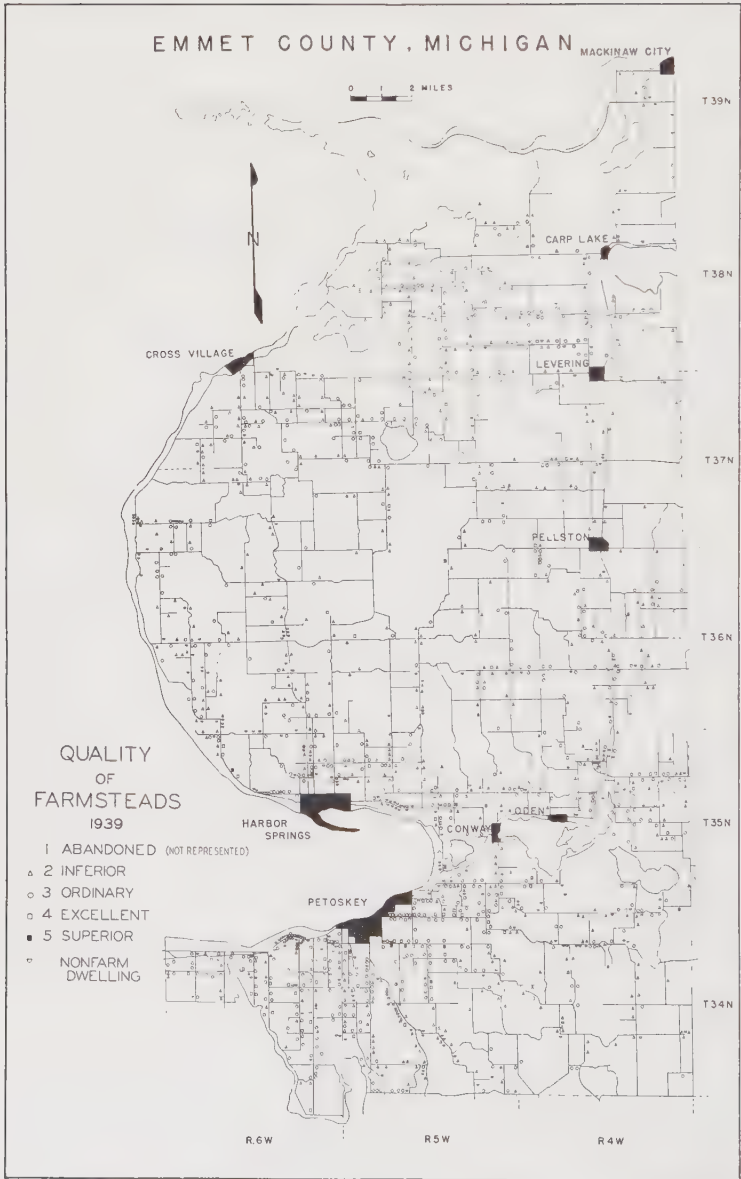


FIG. 2

there a surplus available to be used for the improvement of farm and buildings? Without doubt, personality and circumstance enter the picture, but it can be safely assumed that all the poor families were not concentrated on the poor land types from the very beginning. Consequently, a classification of all the rural dwellings in the county was made. The system used was a modification of the ideas presented in a bulletin published by the Cornell University Agricultural Experiment Station.⁴ Occupied rural farmsteads were estimated on the basis of their quality. Nonfarm dwellings were classified at the same time. The evaluation of farmsteads was carried on without reference to the land types. Five classes of farmsteads were established. Class 1, abandoned farmsteads, will be discussed in a later paper. The other four classes are:

Class 2. — Farmsteads of inferior quality. Such farmsteads might be regarded as barely holding their own, or else they are clearly in the process of deterioration. Buildings are generally unpainted and roofs are in poor condition. Dilapidation of one sort or another prevails everywhere. There is usually little or no attempt to make the surroundings presentable. Dwellings are often log cabins or tar-paper-covered shacks. These farmsteads have either degenerated from a higher classification or never have been sustaining. (See Pl. I, Figs. 1-2.)

Class 3. — Average or ordinary farmsteads. There is a general air of moderate success. All the buildings may not be in the best condition, but a definite effort is made to keep things in good repair. Paint is not necessarily new, though painting is done periodically. Roofs are usually well cared for, and gates and fences are in good order. (See Pl. I, Figs. 3-4.)

Class 4. — Farmsteads distinctly above the average. Buildings are well roofed and painted. Yards are in good condition. Fences are in first-class shape. The appearance of the farmstead indicates that there is a more or less continual expenditure of time and money on improvements. Surplus money beyond that required for the ordinary demands of living must be available to support an establishment of this sort. (See Pl. I, Figs. 5-6.)

⁴ Tyler, H. S., *An Economic Study of Land Utilization in Chenago County, New York*. Cornell University Agricultural Experiment Station, Bulletin 654. Ithaca, New York, 1936.

Class 5. — Farmsteads clearly of superior quality. House, barn, and outbuildings are in optimum condition. The grounds are usually landscaped. A tone of prosperity prevails. There are very few farmsteads of this type. (See Pl. II, Figs. 1-2.)

Nonfarm dwellings. — Dwellings -whose owners receive only a small part of their livelihood from tilling the soil. (See Pl. II, Figs. 3-4.)

Since the first widespread attempt at settlement agriculture has had ample time and opportunity to establish itself in all parts of the county. The possibilities of crop production have been determined primarily by trial and error. Failure and circumstance have eliminated many who attempted to till the soil. Today the density of functional farmsteads on a land type is, in some measure, indicative of the ability of the area to support agriculture (Fig. 2). The smaller the average amount of land per farmstead, the greater is the relative productivity (see Table I).

If the land types with small local relief and slow or poor drainage are considered, a marked difference in farmstead density is noted (Table I). The Cecil type, with 11.94 square miles for each farm home, stands lowest. The Larks is next, with all its farmsteads on the higher ground included within the complex. The Crooked Lake is third. Here a considerable part of the surface has been cleared, but a well-rounded farm program is apparently impossible. The Red School is fourth. This relationship may be expected to change in the near future since the process of clearing is still under way. Within the Brutus area, which is fifth in density, farmsteads are concentrated on the heavier soils. The sandy portions are, for the most part, uncleared or abandoned. The Bear Creek region is so small that the figure indicating the average area for each farm unit may not be reliable.

Two land types have been characterized as having "small relief and rapid drainage." The density relationship is obvious: a more fertile soil and better moisture conditions on the Bliss contribute to the greater concentration. The Pellston is relatively unattractive.

The Walloon, the McKinley, the Readmond, and the Sturgeon are the land types with considerable local relief. The Walloon has the smallest average area per farmstead of any type in the county. Greater dissemination of farms definitely sets the McKinley apart

TABLE I

CORRELATION OF LAND TYPES AND FARMSTEAD TYPES
In the first four columns the second figure is the percentage.

Land type	Farmstead type*				Total number of occupied farmsteads	Total number of non-farms	Number of square miles in each land type	Average number of square miles per occupied farmstead
	Class 2 — inferior	Class 3 — ordinary	Class 4 — excellent	Class 5 — superior				
1. Cecil	2 100	0 0	0 0	0 0	2	1	23.89	11.94
2. Sturgeon . . .	0 0	0 0	0 0	0 0	0	0	8.07	0
3. Red School .	24 61.6	14 36	0 0	1 2.5	39	8	18.48	0.473
4. Brutus	9 37.5	12 50	2 8.3	1 4.2	24	2	8.45	0.352
5. Crooked Lake	4 44.4	3 33.4	1 11.1	1 11.1	9	2	7.10	0.779
6. Readmond . .	185 56.4	123 37.5	18 5.49	2 0.61	328	57	169.16	0.516
7. McKinley . .	69 40.3	82 47.9	20 11.7	0 0	171	15	34.74	0.203
8. Walloon . . .	52 21.5	146 60.3	38 15.7	6 2.48	242	35	29.68	0.123
9. Pellston . . .	15 83	3 17	0 0	0 0	18	7	20.44	1.13
10. Bliss	165 50.3	142 43.3	18 5.4	3 0.91	328	135	96.21	0.293
11. Bear Creek .	7 70	1 10	2 20	0 0	10	11	2.98	0.298
12. Larks	18 69.3	7 26.9	1 3.8	0 0	26	7	46.01	1.77

* Class 1 (abandoned farms) will be discussed in a later paper.

from the Walloon, even though they are similar in appearance. Sandy soil, poor moisture conditions, and excessive slope have discouraged agriculture on the Readmond. The average area for each

farm unit is large. It is not possible to present the figures here, but this land type is characterized also by a great amount of abandonment. On the Sturgeon, as has been said, agriculture has never been attempted.

There are a number of factors that may act to reduce the reliability of comparisons made between the different land types on the basis of average area per farmstead. For instance, on the sandier soils larger surface units are necessary to permit a balanced agricultural economy. Furthermore, the scattered ridges within the Larks offer the only farm sites there. For the Pellston one site is as suitable as any other. The comparisons might have been more critical if they could have been made according to the amount of cleared land rather than according to total areas.

Within each class the farmstead density varies considerably from land type to land type. Reference to Table I will show that this same separation prevails when all the land types are considered together.

The small number of Class 5 farmsteads is of no great value for correlation. At least four of the fourteen listed as superior are supported by funds derived from outside sources. Many of the others are dairy farms. Money is available for maintenance and improvements partly as the result of location near a favorable market. Nevertheless, the six of this class on the Walloon indicate a high standard of farming.

Classes 2, 3, and 4 offer the best opportunity for evaluating productivity as it is reflected in farmstead quality. The Walloon, with 15.7 per cent of the units in Class 4, 60.3 per cent in Class 3, and 21.5 per cent in Class 2, is obviously the best land type for agricultural use. The McKinley has the next highest rating and is followed by the Brutus.

There is some question whether the Crooked Lake or the Bliss should come next in this classification. A greater number of functioning enterprises on the latter, however, gives it priority. After the Crooked Lake, the Readmond, the Bear Creek, the Red School, and the Larks follow. It is to be noted that the order is not valid in terms of any one class. The positions are determined rather by a joint consideration of the three classes for each of the land types named. It is doubtful whether the Bear Creek should precede the Red School.

There can be little question of the relative position of the last three. The Pellston, with 83 per cent of its farmsteads in Class 2, the Cecil, with two farmsteads in Class 2, and the Sturgeon, with no rural habitations, complete the sequence.

A major percentage of the nonfarm dwellings are distributed without reference to the quality of the land types. They are, in a sense, suburban homes built in the vicinity of Petoskey, Harbor Springs, or a place of employment. It is probable that the Bliss, the Readmond, the McKinley, the Walloon, and the Bear Creek areas may on occasion offer more suitable building sites. Otherwise the location is fortuitous.

Many of the nonfarm residents exploit the second-growth timber. Some of the best areas for cutting are found on the Bliss and the Readmond or in the poorly drained land types close at hand. Distribution of such exploitation is controlled by the lack of conditions favorable to farming.

CONCLUSION

Land types have been established with reference only to their physical characteristics. If we make allowances for the personal attributes of ambition, superior training, and home background, and if we discount the advantages that accrue from superior location with respect to market and transportation, then we may expect that the quality and number of farmsteads and the general character of farming will reflect, in some degree, the productive quality of the land type. Such a relationship is well expressed in Emmet County, where no area is at a marked disadvantage with respect to transportation and national markets. It is felt that the analysis of farming, the figures and discussion pertaining to the density of farmsteads, and the correlation between farmstead quality and the land types have indicated the connections that exist. A more detailed investigation would probably reveal closer relationships.

PLATES I-II



FIG. 1



FIG. 2

Class 2 farmsteads. Note the tar-papered house



FIG. 3



FIG. 4

Class 3 farmsteads. That shown in Figure 3 barely falls within this group



FIG. 5



FIG. 6

Class 4 farmsteads

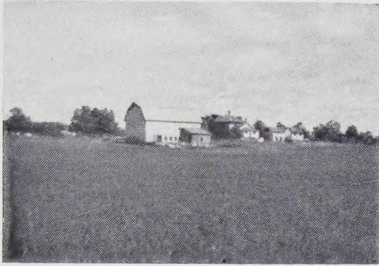


FIG. 1



FIG. 2

Class 5 farmsteads, on the Walloon land type



FIG. 3. A nonfarm residence



FIG. 4. An inferior nonfarm residence

